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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,574	03/12/2004	Hoon Kim	P57012	6505

7590 08/11/2006  
Robert E. Bushnell  
Suite 300  
1522 K Street, N.W.  
Washington, DC 20005

EXAMINER

DICKEY, THOMAS L

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Advisory Action Before the Filing of an Appeal Brief</b>	Application No. 10/798,574	Applicant(s) Kim	
	Examiner Dickey	Art Unit 2826	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 27 July 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: \_\_\_\_\_.
- Claim(s) objected to: 2, 5, 6 and 14.
- Claim(s) rejected: 1, 3, 4, 13, 15, 16, 21 and 22.
- Claim(s) withdrawn from consideration: 7-12 and 17-20.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_
13. ☐ Other: \_\_\_\_\_.



**Thomas L. Dickey**

**Primary Examiner**  
**Art Unit 2826**

Continuation of 3. NOTE: Whether the step of the buffer layer being formed on a single body of said buffer layer with the step protruding from a flat of said buffer layer presents a new issue not previously searched and considered. Consideration must first be given to the broadest reasonable construction (consistent with the specification) of new claim terms "single body" and "flat portion." Next the claim, including elements corresponding to these new terms, must be searched.

Continuation of 11. does NOT place the application in condition for allowance because: It is argued, at page 9 of the remarks, that "Claim 22 has been amended to delete the 'step of said activation layer'" This cures the new matter rejection sent 3/27/06 by supplying a brand new claim (as of 7/27/06) to replace a claim that was brand new on 3/27 but never searched due to the fact that it claimed an invention not found in applicant's original application. Applicant's new 7/27/06 claim may be allowable, or it may not be. After final, the Examiner lacks the time to search new claims.

It is argued, at page 10 of the remarks, that "Entry of the foregoing amendments to claim 22 is proper under 37 C.F.R. 1.116(b) because those amendments simply respond to the issues raised in the final rejection, no new issues are raised, no further search is required, and the foregoing amendments are believed to remove the basis of the outstanding rejections and to place all claims in condition for allowance." However, the new matter rejection of claim 22 was made in response to a 1/5/06 amendment to claim 22 adding new matter. The Examiner is under no obligation to wait six months or more while Applicant formulates a claim that is within his original disclosure, and at the end of that wait, withdraw finality in order to enter said claim, search it, and reject it. Claim 22, now that the new matter is removed, still presents a new issue not previously searched and/or considered.

It is argued, at page 11 of the remarks, that "the claim states 'a buffer layer... said buffer layer having a step'. On the other hand in Busta, pixel element and the drain layer 32 are separate [although hopefully Applicant will admit that layers 12 and 32 form a single contiguous piece] ... [t]herefore, 12 and 32 are two different layers ... [t]herefore, both layers 12 and 32 should not be combined to anticipate the buffer layer of the present invention." This argument leaves unanswered the critical question: Consistent with the specification, what is the broadest reasonable meaning of the term, "a buffer layer?" Applicant clearly states that his view is that the two part layer of Busta is not the claimed layer, but Applicant put forward no argument, or evidence, of what the language claiming said layer should actually be construed as.

It is argued, at page 12 of the remarks, that, "Moreover, it is entirely clear that the drain layer 32 and the pixel element 12 can [sic] be construed as a buffer layer since the identical invention must be disclosed." However, layers 12 and 32 form a device, a physical entity. This Examiner does not "construe" physical entities. This Examiner only construes written statements, such as claims. Busta's thin film transistor is what it is. It cannot be explained away by clever rhetoric.

It is further argued, at page 12 of the remarks, that "Concerning claims 1 and 13, since it not clear that 12 and 32 of Busta forms the buffer layer, then it is not clear that the step is then half or less of the thickness sum of the activation layer." What Applicant apparently means by that statement is "since it is not clear that the claims allow the buffer layer to be formed by two or more sublayers, then it is not clear that the step is then half or less of the thickness sum of the activation layer." However, the only thing that could make it clear that the claimed buffer layer may not be formed by two or more sublayers would be Applicant's application, as filed, and the broadest reasonable interpretation of "buffer layer" consistent with said application. Applicant's originally filed application neither requires nor prohibits a two-layer buffer.

If Applicant owned a patent including claims 1 and 13 as they are presently constituted, and there were an accused device including every limitation of said claims except that the accused device had a two piece buffer layer, Applicant would be the first to insist that because the specification does not clearly disclaim a two piece buffer layer, the claims must read on said hypothetical accused device. Furthermore, Applicant would have every right to do so. Given that (in Applicant's words) "it is not clear," why will Applicant not concede that the Examiner has the same right: to read these claims broadly enough to read on an embodiment that is not prohibited by Applicant's original disclosure?

Looking at 4,949,141 figures 2A, 2B, and 3, moreover, it seems the little nubbin or stub of pixel electrode material 12 formed under layers 32 and 34 is not a pixel electrode per se, because only the main body of part 12 (the big square seen in figure 3 between the data and scanning lines) can be contacted with liquid crystal material to make a functioning pixel. The little stub marked "12" in figure 2B is covered with gate oxide 40 and cannot form a functioning pixel. Stub "12" serves no function except to raise (along with layer 32) active layer 34 a little bit off substrate 10.

It is argued, at page 13 of the remarks, that "microcrystalline ... is not necessarily polysilicon." With all due respect, that is a silly statement. "Poly" is Greek for "many." Polycrystalline means "many crystals." See Academic Press Dictionary of Science and Technology (1992), the New Penguin Dictionary of Science (1998), and the Penguin English Dictionary (2000). In accordance with these definitions, the only crystal that is necessarily not polysilicon is monocrystalline (single, as opposed to many, crystals).

It is argued, at page 14 of the remarks, that "The claim also states specifically 'laser annealing polysilicon.'" However, claims 4 and 16, which are the only claims that specifically claim laser annealing polysilicon, are dependent claims. After final, Applicant should not raise an argument that only applies to dependent claims unless Applicant is willing to re-write claims 4 and 16 in independent form, canceling base claims and intermediate claims. Further, a claim to "polysilicon" reads on polysilicon formed by any process (laser annealing, thermal annealing, solid phase crystallization, MILC, lateral LC, etc.), because in a product claim only the product is relevant. See *SmithKline Beecham Corp. v. Apotex Corp.*, Fed. Cir., No. 04-1522, 2/24/06 ("While the process set forth in the product-by-process claim may be new, that novelty can only be captured by obtaining a process claim.")

It is further argued, at page 14, that "When a person of ordinary skill in the art is referring to polysilicon, they are not referring to microcrystalline silicon even though the Examiner may argue that one maybe [sic] inclusive of the other, but a person of ordinary skill in the art still separates the two." However, the understanding of a person of ordinary skill in the art is a question of fact. Questions of fact must be settled on evidence. There is no evidence, outside of Applicant's unsupported statements, to support the proposition that a person of ordinary skill in the art separates "polycrystalline" from "microcrystalline." The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) ("An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required..."). See MPEP §§ 716.01(c) and 2145.

It is argued, at pages 15-16 of the remarks, that "However, step y of 80-90 angstroms is from example one and the 300 angstroms is from example 4." However, as the Examiner previously explained, Adachi et al. disclose the 300 angstroms gate-insulating layer at column 8

line 52. In Adachi et al., the text of EXAMPLE 4 (to which Applicant attributes the 300 angstrom layer) ENDS at column 6 line 59, just above the heading, "EXAMPLE 5." The text of EXAMPLE 5 ends at column 7 line 59, just above the heading, "COMPARATIVE EXAMPLE." The text describing Adachi et al.'s COMPARATIVE EXAMPLE ends at column 8 line 40, just above the paragraph beginning, "In accordance with the preferred embodiments of the invention..." Therefore it is clear that Applicant misrepresents the facts when he asserts that "300 angstroms" is "from" EXAMPLE 4. If the column 8 line 52 disclosure of "300 angstroms" is "from" anything, it is "from" the two paragraphs beginning at column 8 line 40 and ending at column 8 line 55, which recite in pertinent part, "In accordance with the preferred embodiments of the invention... overetching ... can be reduced [so that] a step coverage of the gate insulating layer and the gate electrode is improved... it is possible to suppress the overetching to 100 angstroms or less.... in accordance with another aspect the invention, a gate insulating layer can be formed by forming a thin oxide layer (30-300 angstroms)...." From these two paragraphs one may conclude that the 80-90 angstroms step of figure 1E is a sine qua non of Adachi et al.'s invention, as is a 30-300 angstroms gate insulating layer overlying said step.

It is argued, at page 17 of the remarks, that "Both Adachi and Yamazaki fail to teach or suggest an activation layer comprising a solid-phase crystallization polysilicon. Adachi teaches an amorphous silicon layer as seen in col. 7 of Adachi (as seen in reference 13 and 23) and Yamazaki teaches an amorphous silicon film as seen in paragraph 89. An amorphous silicon film is a silicon that does not have a crystalline structure and contrast that [sic] with the crystallization polysilicon, which is a silicon with a crystalline structure. Therefore, the measurements given for the amorphous silicon layer are not related to the presently claimed invention." This statement is another example of Applicant's most annoying quality, namely his belief that he has the right to misrepresent the prior art by quoting it out of context. Adachi et al.'s column 7 lines 1-43 describe converting amorphous silicon layer 33 into polysilicon, by the process of excimer light annealing (ELA). Tens of thousands of scientists and engineers around the world have performed ELA. Scores of textbooks (for example, Kagan and Andry (ed.), Thin Film Transistors) describe ELA. Given the widespread understanding of how ELA produces polysilicon, what does Applicant hope to gain by claiming that of Adachi et al. disclose only amorphous silicon, which after all is the raw material of the ELA process?

Finally, it is argued, at pages 17-18 of the remarks, that "the Examiner's statement that the solid phase crystallization is not the final product is not a correct statement as seen in paragraph 38 of the present invention. Therefore, as seen in the original claim of the present invention, the limitation must be taken into account. As shown above, the opposite is true in that the measurements mentioned above for the other references of record were for the intermediate product and not for the final product." However, solid phase crystallization (SPC) is neither a final product nor an intermediate product. Solid phase crystallization is a process. See page 158 of Kagan and Andry, cited above. An eight-year-old (English-speaking) child would be able to guess that "solid phase crystallization" is a method because the word "crystallization" combines the verb "crystallize" with the ending "ion." What is going on? Does Applicant lack the insight of an eight-year-old child? Or does Applicant somehow hope that raising 19 pages of objections, regardless of their actual merits, will somehow wear down the Examiner until a patent is issued?